REMARKS/ARGUMENTS

Favorable reconsideration of the present application is respectfully requested.

Claims 11 and 26 have been indicated as being allowable if rewritten in independent form (paragraph 8 of the Office Action). Claims 11 and 26 have therefore been rewritten in independent form. Additionally, since Applicants believe that Claims 6, 15, 21 and 30 also define over the prior art, as set forth below, the subject matter of Claims 6, 15, 21 and 30 have respectively been incorporated into Claims 1, 12, 16 and 27. New dependent Claims 31 and 32 correspond to Claims 2 and 17, except for their dependencies. Claims 3-10, 14, 15, 18-25 and 29-30 have been cancelled.

According to a feature of the invention set forth in the claims, a vehicular control device or method prohibits a neutral control performed when the vehicle is stopped while in a running stage, on the basis of a predetermined condition regarding operating mode control performed for the power source, for example on the condition that a factor threatening to cause deterioration in vehicular performance through performance of the neutral control is detected. This may be exemplified by the abnormal operation of, e.g., the throttle body, the VVT mechanism or the airflow meter, or where the engine coolant or exhaust catalyst temperature is not in the normal range (see paragraph [0077]).

Claims 6 and 21 recite cooperative control for adjusting an increase or decrease in the output of the engine in accordance with a load required for the driving wheels. for example, an example of the cooperative control is described in paragraph [0058]. Claims 6 and 21 further recite that the predetermined condition regarding the operating mode control is determined on the basis of the detection of a factor threatening to hinder the performance of the cooperative control, the factor threatening to hinder performance of the cooperative control comprising a deterioration in the performance of an engine valve open-close timing change mechanism that adjusts timing for opening or closing engine valves for actuating the

engine. An example of this is described with reference to steps S402-S405 in Figure 4A. Claims 6 and 21 were rejected under 35 U.S.C. § 103 as being unpatentable over U.S. patent 6,533,704 (Saito et al.), either alone or in combination with U.S. patent 5,369,581 (Ohsuga et al.) and in view of U.S. patent 6,352,061 (Takahashi). (Ohsuga et al. is evidently mentioned only because of its inclusion in the rejection of paragraph 6A, and so it will not be further discussed.) However, this rejection is respectfully traversed.

Saito et al. discloses a control system for a vehicle engine and transmission, which is particularly directed to performing a quick shift control to establish a forward drive condition from neutral when the vehicle has been kept stationary on an upward slope (column 2, lines 16-22). Saito et al. discloses two types of neutral control: a drive mode neutral control (step S14 performed during vehicle deceleration) and a halt mode vehicle control (step S4) performed when the vehicle is stationary with the brake engaged.

Saito et al. describes certain situations in which the drive-mode neutral control and halt-mode neutral control are not executed due to failure of an engine sensor or the throttle controller 50:

> For the above described control, the inclination sensor 37, the acceleration sensor 38, the output rotation sensor 40, etc. are important. If any of the sensors experiences a failure, then the control will become unstable and unreliable. To circumvent this problem, the control system monitors these sensors, and if any failure is detected, then the control system will not execute the drive-mode neutral control and the halt-mode neutral control. Furthermore, the calibration of the inclination sensor 37 at Step S63 is executed gradually, and the number of repetition of this process taken for the calibration is recorded. While this number is small, i.e., while it is considered that the calibration has not completed, for the drive-mode neutral control, the control system adjusts the engine output (target engine rotational speed), which is decided in accordance with the road inclination, to a value which is determined for a maximum possible inclination as a safety precaution.
>
> Also, if the control system detects a failure in the operation of the engine output control device [throttle controller] 50, i.e., the secondary air passage control device or the drive-by-wire type

> throttle actuator, then the control system will not execute the drive-mode neutral control and the halt-mode neutral control. (Col. 12, lines 11-34).

Significantly, Saito et al. describes that the halt-mode neutral control will not be executed do to failure of the aforementioned inclination sensor, acceleration sensor, output rotation sensor or throttle controller, *but does not describe failure of the engine valve open-close timing control mechanism as being a basis for preventing execution of the halt-mode neutral control*. Saito et al. therefore fails to teach or suggest prohibition of the performance of the neutral control, when the vehicle is stopped, on the basis of deterioration in performance of an engine valve open-closed timing change mechanism.

The Examiner has nonetheless alleged that those skilled in the art "would have recognized that problems involving other critical operating functions, such as timing, which would have lead to inefficient engine operation" should also be a basis upon which to prohibit neutral control. However, the Examiner has identified no teaching in Saito et al. to support this allegation. In fact, the suggestion of Saito et al. is the opposite: Saito et al. has identified those elements which "are important" for stable engine operation (column 12, line 13), i.e., the inclination sensor, the acceleration sensor, the output rotation sensor and the throttle controller. Saito et al.'s itemization of these elements as important elements, but its failure to include deterioration in performance of the engine valve open-close timing change mechanism, is thus evidence that those skilled in the art would not have recognized this element to be important as a factor for prohibiting execution of the halt-mode neutral control.

Alternatively, the Examiner has alleged that Takahashi provides evidence that it was known in the vehicle control art "that valve timing is a critical function to be considered in cooperative control between the engine and automatic transmission" and, by implication, provides evidence that those skilled in the art would have used deterioration of the engine valve open-close timing change mechanism a basis upon which to prohibit neutral control.

Takahashi discloses, at lines 6-17 of column 1, that the operation of a variable engine valve timing mechanism should be stopped while the transmission is shifting or a lockup clutch is in the process of switching, in order to restrain a shift shock. Takahashi thus discloses that the selective adjustment of the engine valve timing may be a part of a cooperative control between an engine and a transmission. However, it also teaches that the cooperative control itself creates instability (shift shock) and should be terminated under certain operating conditions. This suggests the *opposite* of the examiner's allegation: since the performance of the cooperative control creates instability, a factor threatening to hinder performance of the cooperative control would promote stability and should not be used to prohibit neutral control. Accordingly, Takahashi does not provide evidence that those skilled in the art would have used deterioration of the engine valve open-close timing change mechanism a basis upon which to prohibit neutral control.

Claims 12 and 27 now recite the feature of canceled Claims 15 and 30 that a factor threatening to cause deterioration in the vehicular performance is determined on the basis of at least one of a bed temperature of a catalyst disposed in the exhaust passage of the internal combustion engine and a temperature of coolant for cooling the engine. Claims 15 and 30 had been rejected as being anticipated by Saito et al. (or optionally as obvious over Saito et al. in view of Ohsuga et al.), with specific reference to lines 4-6 of column 6 of Saito et al., i.e., that the transmission is not allowed to be set into a neutral condition if the oil temperature of the transmission or the cooling water temperature of the engine are lower than predetermined values. However, the Examiner's attention is respectfully directed to the fact that the cited portion of Saito et al. is not directed to the halt-mode neutral control but is instead directed to the *drive-mode* neutral control during deceleration. The noted portion of Saito et al. therefore provides no basis for suggesting that neutral control while the vehicle is stopped while in a running range should be prohibited based upon the claimed factors.

Applicants therefore believe that the present application is in a condition for allowance and respectfully solicit an early Notice of Allowability.

Respectfully submitted,

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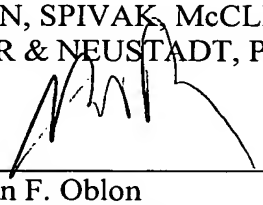

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